

## **CHILD'S TRAVEL TRAY**

### **FIELD OF THE INVENTION**

The present invention relates generally to a device that is adapted to be selectively interconnected to a child's seat, such as a car safety seat or a stroller. One embodiment of 5 the present invention includes one or more locations adapted to receive and secure a drink holder, and which may employ a reinforced area adapted for play or drawing.

### **BACKGROUND OF THE INVENTION**

Child safety seats are required by law in many jurisdictions of the United States, wherein caretakers of children of a certain age are mandated to restrain their child in 10 government approved restraint seats while in an automobile, thereby reducing the probability of injury to the child in the event of an accident. In addition, many public transportation systems provide locations to receive child safety seats. Safety seats are generally adapted to provide a location for comfortably seating a child, means for securing them therein, and locations wherein the seat may be attached to the interior of a vehicle. Many child safety 15 seats are adapted to interconnect with hardware that transforms them into strollers, wherein a parent is afforded dual use for their safety device. Further, many jurisdictions dictate that children be seated in the rear compartment of an automobile to further prevent serious injury to a child due to a collision or from the deployment of airbags, which are generally located in the front compartment of the automobile.

20 Since children are usually seated in the rear compartment of an automobile for protection, interaction with the driver is practically impossible and often dangerous. Alternatively, if two people are in the car together, one must sit in the rear to tend to the child, making conversation therebetween distracting and difficult. As most parents will

appreciate, children tend to become bored without a sufficient amount of stimulation when driving on long car trips, which can lead to distraction of the driver of the automobile if the child becomes disruptive. Many modern automobiles employ entertainment devices to occupy children, such as DVD players, VCR players, and video games, either integrated into the ceiling or front seats of the automobile. Although entertainment means provide children with sufficient stimulation during a trip, many parents either cannot afford a vehicle that includes these types of amenities or do not wish their children to watch too much TV, for example. Thus, the child is left to his or her own devices to entertain themselves during a long journey, which may lead to disruptive behavior.

Further during extended automobile trips and airline flights, children are in need of food or entertainment as well. Since airline practices generally dictate that during the flight passengers should be securely seat belted, feeding and interaction with the child is difficult. More specifically, the side-by-side seating arrangement creates an angle that makes interaction difficult because the caretaker of the child must twist uncomfortably.

In addition, parents are usually find interacting with their children difficult when using a stroller, because their main function is to push the stroller to transport the child, while performing everyday activities, such as grocery shopping. Thus, as described above, a child is potentially unstimulated.

Thus, there is a long felt need in the area of childcare to provide an apparatus that is adapted to selectively interface with a child's seat that allows the caretakers to perform their normal duties, while providing enough mental stimulation and locations to store drinks, games, toys, etc. to the children in their care.

The following disclosure describes a device that is adapted to selectively interconnect with a child safety seat, a stroller, an airplane seat, or any seat adapted to receive a child, wherein pockets, holders and play areas are provided such that the child will have an

increased ability to play, and securely store a beverage, and have a play area to read books, play with toys and engage in other stimulating activities.

### SUMMARY OF THE INVENTION

It is thus one aspect of the present invention to provide a tray that is adapted for selective interconnection to a child safety seat generally used in automobiles. More specifically, one embodiment of the present invention is adapted to selectively interconnect with a child safety seat through the use of hook and loop fasteners, such as velcro, snaps, zippers, "C"-channels, latches, etc. Preferably, one embodiment of the present invention is provided with hook and loop fasteners, wherein the caretaker interconnects, with glue for example, one side of the fastener to the child safety seat, and wherein the other mating surface of the fastener is sewn into the tray. Upon seating a child and strapping them in safely, the caretaker simply drapes the tray over the child's legs, thus providing an area for play and storage. The tray is secured to the seat by selectively interconnecting the velcro halves together on both sides. Alternatively, the tray of the present invention may be rigidly interconnected to one side of the safety seat via screws or bolts, wherein the other side is selectively interconnected thereto, thus providing a hinged interconnection scheme.

It is yet another aspect of the present invention to provide a tray that is adapted to interface with other child seating devices such as an airplane seat or a stroller seat. With respect to an airplane seat, it is envisioned that magnets or other selective interconnection devices be employed to interconnect the tray to the existing arms of airplane seats. Alternatively, the tray of the present invention may be supplied with sleeves that slide onto the two arms of the chair which are generally located on all commercial aircraft, thereby providing a stable foundation for which to support the tray. With respect to a baby stroller, the same interconnection means described above may be used. More specifically, one embodiment of the present invention is adapted to provide the consumer with a hook and

loop fastener system, wherein one side of the fastener is permanently secured to an existing baby stroller.

Another aspect of the present invention is to include a plurality of pockets integrated into the tray to thus provide locations wherein toys, books, or other items, generally used with children, may be stored. More specifically, one embodiment of the present invention provides at least two mesh pockets that are adapted to hold items such as crayons, markers, drawing paper, baby bottles, video games, diapers, etc. In addition, as will be described in greater detail below, the present invention also includes a reinforced area for play. This area is adapted to be used for drawing, as such, it may be adapted with a plurality of pen holders or pockets to hold drawing supplies as well.

It is another aspect of the present invention to provide a location for drawing. In one embodiment of the present invention, rigid material, such as plastic, wood, aluminum, steel, Inconel, tin, etc., is selectively interconnected to a portion of the tray that rests generally over the child's lap, thereby providing sufficient area for them to play or draw. In a related embodiment of the present invention, the rigid portion is removable, such that the tray may be used in a plurality of situations, depending on the needs of the child.

Another embodiment of the invention integrates a wipe on/wipe off board into the lap portion of the tray, which is generally used with non-permanent markers repeatedly without the use of paper that causes clutter in the backseat of an automobile. In addition, a game such as tic-tac toe, etch-a-sketch, road bingo, etc., may be employed on the lap portion of the tray to provide entertainment to a child. A magnetic surface or a surface with hook and loop fasteners may also be provided such that special toys may be used in conjunction therewith, such as magnetized blocks or playing toys with employing velcro thereon, wherein the toys would less likely be misplaced.

Another related aspect of the present invention is that it be capable of receiving a cord that is in electrical communication with a video device, such that images will be displayed directly on the lap portion of the tray. More specifically, as DVD players and computer screens become thinner, it is envisioned that such a screen be integrated into the tray such that the addition of a power cord and video feed cord may be integrated into the present invention, wherein a child's favorite movies, games, or educational computer programs would be displayed thereon, thus providing stimulation to the child. Alternatively, the tray may be adapted to receive a tablet type computer, wherein the power source and the video feed capabilities are included therein, thus not requiring the video feed cord or power cord.

It is yet another aspect of the present invention to provide a tray that may selectively secure a cup, can, plastic bottle, or other devices to store a beverage. More specifically, one embodiment of the present invention includes at least one drink holder that is a generally cylindrical appendage that hangs from the tray and which is accessed via an aperture thereon, thus providing a location in which to store a baby bottle, for example. Preferably, the drink holders of the present invention are adapted to be free of other apertures besides the initial opening, however, other mesh-type cup holders may be provided. In addition, since the drink holders are of a non-mesh material in one embodiment of the invention, they are adapted to be easily used to hold other items such as toys, crayons, tissues, pacifiers, snacks, etc.

Yet another aspect of the present invention is that it be constructed of cost effective materials. Preferably, one embodiment of the present invention is constructed from nylon, wherein the pockets and cup holders are sewn in one unit. Alternatively, other compliant materials, such as cloth, may be employed that provide an easily maintainable and repairable tray. One advantage of many compliant materials is their resistance to fluids, wherein spills may be contained on the tray. One embodiment of the present invention is adapted to be easily hand or machine washed. In addition, a compliant tray is easily folded for storage. Alternatively, the present invention may be constructed, at least partly, from a rigid material

to provide a more stable play location. Although there are some drawbacks to this design, with respect to safety and damage repair, it may be desirable for some to use this embodiment, such as on an airplane, for example.

As should be appreciated by one skilled in the art, the present invention may be easily scaled to any size or be constructed of any color material. In addition, it is envisioned that company logos, or brightly colored objects be integrated on the tray, in one embodiment, to thus provide additional visual stimulation to a child.

Thus, it is one aspect of the present invention to provide a travel tray that selectively interconnects to a child safety seat, thus providing locations for storage comprising:

10        a surface that is defined by a left edge, a right edge, an interior edge, and an exterior edge, wherein said surface is adapted to drape over the lap of a child sitting in a child's seat;

            a left fastening mechanism interconnected proximate to said left edge of said surface, wherein said left fastening means is adapted to selectively interconnect proximate to the left arm of the child's seat;

15        a right fastening mechanism interconnected proximate to said right edge of said surface, wherein said right fastening means is adapted to selectively interconnect proximate to the right arm of the child's seat; and

20        a substantially rigid panel integrated into said surface, such that said substantially rigid panel is situated proximate to the child's lap and is adapted to support a toy, a book, or other play devices when said left fastening mechanism and said right fastening mechanism are selectively interconnected to the left arm and the right arm of the child's seat.

The Summary of the Invention is neither intended nor should it be construed as being representative of the full extent and scope of the present invention. The present invention is set forth in various levels of detail in the Summary of the Invention as well as in the attached drawings and the Detailed Description of the Invention and no limitation as to the 5 scope of the present invention is intended by either the inclusion or non-inclusion of elements, components, etc. in this Summary of the Invention.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

The accompanying drawings, which are incorporated in and constitute a part of the specification, illustrate embodiments of the invention and together with the general 10 description of the invention given above and the detailed description of the drawings given below, serve to explain the principles of these inventions.

Fig. 1 is a top plan view of a tray of one embodiment of the present invention;

Fig. 2 is a front elevation view of the embodiment shown in Fig. 1;

Fig. 3 is a front perspective view of the embodiment shown in Fig. 1, wherein the 15 present invention is selectively interconnected to a child's safety seat and draped over a child's legs;

Fig. 4 is a top plan view of an alternate embodiment of the present invention, wherein drink holders are omitted;

Fig. 5 is a top plan view of an alternate embodiment of the present invention, 20 which includes a centralized drink holder and an enlarged rigid panel; and

Fig. 6 is a top plan view of an alternate embodiment of the present invention, which includes a single drink holder and an enlarged rigid panel.

It should be understood that the drawings are not necessarily to scale. In certain instances, details which are not necessary for an understanding of the invention or which render other details difficult to perceive may have been omitted. It should be understood, of course, that the invention is not necessarily limited to the particular embodiments illustrated herein.

To assist in the understanding of the present invention the following list of components and associated numbering found in the drawings is provided herein:

	<u>#</u>	<u>Component</u>
	2	Tray
10	4	Pocket
	6	Drink Holder
	8	Rigid Panel
	10	Child Safety Seat
	12	Exterior Edge
15	14	Interior Edge
	16	Left Edge
	18	Right Edge
	20	Child
	22	Fastening Mechanism
20	24	Second Fastening Mechanism
	26	Toy

## DETAILED DESCRIPTION

Referring now to Figs. 1-6, a tray 2 of the present invention is shown herein. More specifically, the tray 2, which is generally comprised of a compliant material, is shown and employs a plurality of pockets 4 and a plurality of drink holders 6 along with a rigid panel 8 for play. The tray 2 of the present invention is constructed generally of a rectangular piece 5 of compliant material that is adapted to selectively deflect and conform to a child's safety seat 14. The tray 2 of one embodiment of the present invention includes an exterior edge 12, an interior edge 14, a left edge 16 and a right edge 18. The rigid panel 8 is designed to lay across the lap of a child 20 such that he or she is afforded a stiff location in which to play or 10 write.

Referring now to Figs. 1 and 2, the tray 2 of the present invention is shown herein. More specifically, one embodiment of the invention includes a rectangular piece of compliant material that includes an exterior edge 12, an interior edge 14, a left edge 16, a right edge 18, a plurality of drink holders 6, and a plurality of pockets 4. In addition, a 15 substantially rigid panel 8 is provided, thus providing a stable play or drawing area. One skilled in the art will appreciate that the location and size of the tray 2 may be altered to fit many types of child seating arrangements. For example, the present invention may be scaled up or down to fit stroller chairs, safety chairs, chairs in airplanes, stadium chairs, etc. In addition, the dimensions and locations of the drink holders 6, and pockets 4, and rigid panel 20 8 may be shaped and scaled in a plurality of ways. Preferably, in one embodiment of the present invention, the drink holders 6 are approximately 3 ½ inches in diameter, the right edge 18 and left edge 16 are about 9 inches long, and the exterior edge 12 and interior edge

14 are about 32 inches long. However, as mentioned above, one skilled in the art will appreciate that the edges are not required to be of equal length, and many shapes may be created with respect to the compliant material, wherein the intention of the present invention is met.

5           As shown, the pockets 4 are created of a mesh material to facilitate the location and viewing of the item contained therein. Alternatively, a solid pocket may be used, or the pocket may be omitted altogether. As seen more distinctly in Fig. 2, a fastening mechanism 22 is also included proximate to the left edge 16 and right edge 18 of the present invention. This fastening mechanism 22, preferably, in one embodiment of the present invention, is a hook and loop type fastener, such as velcro, which extends the length of both edges, and which is adapted to selectively interconnect with a second fastening member that is interconnected to the child seat. Alternatively, other fasteners such as snaps, latches, zippers, bolts, screws, "C"channels, etc., may be used to selectively fasten the tray 2 to the child seating area.

10

15           Referring now to Fig. 3, one embodiment of the present invention selectively interconnected to a child safety seat 10 is shown herein. The present invention is adapted to selectively interface with a fastening mechanism 24 on the child seat. This fastening mechanism 24 is interconnected to the seat 10 by a child's caretaker prior to attaching the tray 2. Preferably, in one embodiment of the present invention, the caretaker interconnects, via glue, screws, zippers, snaps, etc., the fastening mechanism 24 that is adapted to selectively interconnect with the fastening mechanism 22 on the tray 2. Alternatively, other types of fastening mechanisms such as sleeves, clamps, magnets, etc., may be used to

20

selectively interconnect the tray 2 to a chair that cannot be altered, such as an airplane chair or a chair at a sports venue. As shown herein, the tray is adapted to rest on or about the lap of the child 20, wherein compliant material is adapted to selectively deflect and interface with the fastening mechanism 24. Thus, the drink holders 6 of one embodiment of the present invention are adapted to straddle the legs of the child 20, and the rigid panel 8 is adapted to provide sufficient location for play over the child's 20 lap. One skilled in the art will appreciate that the present invention may be realized by the use of a rigid material, as described above, such that certain compliant areas are integrated therein to allow for the connection to the child seating area as shown. In addition, as shown herein, the exterior edge 12 faces away from the child 20. However, the present invention is designed to easily be reversed such that the exterior edge 12 is closer to the child 20, thereby bringing the drink holders 6 closer to the child 20. This configuration is designed for children of smaller stature so that they may reach their drinks or snacks.

Further, it is envisioned that the rigid panel 8 be either sewn into the compliant tray 2 or adapted to be selectively removed therefrom. More specifically, one embodiment of the present invention is provided with a pouch such that rigid material may be selectively interconnected thereto, thus providing a means to effectively clean the present invention, for example. A second alternative embodiment of the present invention includes a selectively interconnectable rigid panel 8. This embodiment of the present invention includes a fastening means between the rigid panel 8 and compliant material halves, such that the rigid panel 8 may be separated from the compliant portions. This embodiment is envisioned to be used possibly with the previously mentioned embodiments that include touch screens or

computer monitors, for example, wherein the compliant side panels are interconnected to the computer monitor and thus capable of being removed, cleaned or repaired.

Referring now to Fig. 4, an alternate embodiment of the tray 2 is shown herein. This embodiment of the present invention is very similar to the one previously described, 5 however, the drink holders are omitted. It may be desirable not to allow a child to have access to snacks or food. In this embodiment of the present invention, the child is limited to the pockets 4 and the rigid panel 8. However, other embodiments may be created wherein the pockets 4 are also omitted. Further, it will be appreciated by one skilled in the art that the drink holders may be constructed wherein they are selectively interconnected to the tray 10 such that they are removable, wherein the apertures left after removal may be covered up with patches that are also selectively interconnected to the tray.

Referring now to Fig. 5, another embodiment of the tray 2 that is provided with a centralized drink holder 6 and larger rigid panel 8 is shown herein. This embodiment of the present invention is adapted to interface with the child seating area wherein the child's legs 15 can straddle the drink holder 6. Also, the rigid panel 8 member is contoured to the shape of the drink holder 6. It is important to note that the rigid panel 8 of this and all embodiments of the present invention are envisioned to either be selectively interconnected to the tray 2 or rigidly connected thereto.

Referring now to Fig. 6, another embodiment of the tray 2 is shown herein. This embodiment of the present invention provides a drink holder 6 that is oriented to one side of the child and a larger rigid panel 8. As it has been shown in the last four figures, any combination or orientation of the drink holder 6, rigid panel 8, and pockets 4 may be created to meet the ideals of the present invention.

While various embodiments of the present invention have been described in detail, it is apparent that modifications and adaptations of those embodiments will occur to those skilled in the art. However, it is to be expressly understood that such modifications and adaptations are within the scope and spirit of the present invention, as set forth in the following claims.